

Abstract

A signature scheme is provided in which a message is divided in to a first portion which is hidden and is recovered during verification, and a second portion which is visible and is required as input to the verification algorithm. A first signature component is generated by encrypting the first portion alone. An intermediate component is formed by combining the first component and the visible portion and cryptographically hashing them. A second signature component is then formed using the intermediate component and the signature comprises the first and second components with the visible portion. A verification of the signature combines a first component derived only from the hidden portion of the message with the visible portion and produces a hash of the combination. The computed hash is used together with publicly available information to generate a bit string corresponding to the hidden portion. If the required redundancy is present the signature is accepted and the message reconstructed from the recovered bit string and the visible portion.

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